CLAIMS

We claim:

1. A method of screening for a bioactive agent capable of altering a cellular phenotype, said method comprising:

a) combining at least one candidate bioactive agent and a population of cells; and

b) sorting said cells in a FACS machine by separating said cells on the basis of at least five cellular parameters.

2. A method according to claim 1 wherein a library of candidate bioactive agents are combined with said population.

3. A method of screening for a bioactive agent capable of altering a cellular phenotype, said method comprising:

a) introducing a library of nucleic acids each encoding a candidate bioactive agent into a population of cells; and

b) sorting said cells in a FACS machine by separating said cells on the basis of at least three cellular parameters.

4. A method according to claim 3 wherein said library is a retroviral library.

5. A method according to claim 3 or 4 wherein said cellular phenotype is exocytosis and said cellular parameters are selected from the group consisting of light scattering, fluorescent dye uptake, fluorescent dye release, annexin granule binding, surface granule enzyme activity, and the quantity of granule specific proteins.

6. A method according to claim 5 further comprising subjecting said cells to conditions that normally cause exocytosis.

7. A method according to claim 3 or 4 wherein said cellular phenotype is cell cycle regulation and said cellular parameters comprise cell viability, proliferation, and cell phase.

8. A method according to claim 3, 4, 5, 6 or 7 wherein said nucleic acids comprise fusion nucleic acids comprising:

a) said nucleic acid encoding said candidate bioactive agents; and

b) a detectable moiety.

9. A method according to claim 1, 2, 3, 4, 5, 6, 7 or 8 wherein said cells are tumor cells.

10. A method according to claim 8 wherein said detectable moiety is a fluorescent protein.